Technical Report 1100

An Annotated Bibliography of Recruiting Research Conducted by the U.S. Army Research Institute for the Behavioral and Social Sciences

Lisa M. Penney, Kristen E. Horgen, and Walter C. Borman
Personnel Decisions Research Institutes

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14. ABSTRACT *(Maximum 200 words):*
This is an annotated bibliography of research by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) on Army recruiting. Most of the research covered in this report was conducted during the period 1980 and 1999. To provide a framework for this work the research summaries are organized around a model of Army recruitment showing the important factors contributing to successful recruiting. In the model, recruiter production is conceptualized as a joint function of recruiter performance and youths' propensity to enlist. Propensity to enlist is linked to advertising effects and several other environmental factors. Recruiters' performance, in turn, is influenced by their personal characteristics, the training and mentoring they receive, and the level of technical and organizational support provided to them. The ARI research relating to each of these major components in the recruitment model is documented in this report.

15. SUBJECT TERMS
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U.S. Army Research Institute
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A Directorate of the U.S. Total Army Personnel Command

EDGAR M. JOHNSON
Director

NOTICES

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An Annotated Bibliography of Recruiting Research Conducted by the U.S. Army Research Institute for the Behavioral and Social Sciences

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Selection and Assignment Research Unit
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Army Project Number	Personnel Performance and
2O262785A790	Training Technology

FOREWORD

The current Army recruiting environment is extremely challenging. Army jobs are becoming more diverse and technically sophisticated and there is a continuing need to attract highly qualified youth to join the Army. In today's competitive marketplace, with its many employment opportunities, the Army and the U.S. Army Recruiting Command (USAREC) are experiencing a difficult time meeting quotas for enlistment. The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) is dedicated to working with the USAREC to provide a research base in support of enhancing the effectiveness of the recruitment process and the strategies used to attract youth.

In support of this objective, ARI sponsored the first meeting of the Recruiting Research Consortium for the U. S. Army Deputy Chief of Staff for Personnel. Representatives from the USAREC and five research organizations that have been actively involved in conducting recruiting research for the U.S. Army were in attendance. In September 1999, at this initial meeting of the Research Consortium, ARI provided a historical overview of its recruiting research that is summarized in this report.

A total of 68 reports, book chapters, and professional journal articles are summarized pertaining to recruiter selection, performance assessment, training and development, technical and organizational support of recruiting, environmental factors that impact recruiting (e.g., national unemployment), advertising effects, and personal and sociological factors influencing youth enlistment propensity. A comprehensive but brief summary of the key findings is presented for each referenced report. This information can be used to find what is known from past work and to identify research questions and issues that merit future examination.

Zita M. Simutis
Technical Director

AN ANNOTATED BILBIOGRAPY OF RECRUITING RESEARCH CONDUCTED BY
THE U.S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL
SCIENCES

EXECUTIVE SUMMARY

Requirement:

The purpose of this annotated bibliography is to describe the recruiting research
conducted by the U.S. Army Research Institute for the Behavioral and Social Sciences
(ARI). The articles reviewed pertain to recruiter selection, recruiter performance
assessment, recruiter training and self-development, technical and organizational
support of recruiting, environmental factors that impact recruiting (e.g., national
unemployment), advertising effects, and personal and sociological factors influencing
youth enlistment propensity.

Procedure:

ARI provided published articles, technical reports, and research notes covering
ARI-sponsored recruiting research. A total of 68 research reports, most published
during the period 1980-1999, were reviewed and a summary of the key findings for each
report is provided.

The bibliography is organized around a model of military recruitment that
shows the important factors contributing to success in the recruitment process. In the
model, recruiter production is conceptualized as a joint function of recruiter
performance (i.e., the effort put forth by individual recruiters toward attracting qualified
candidates) and youths' propensity to enlist. Recruiters' performance, in turn, is
influenced by the personal characteristics they bring to the recruiting environment, the
training and subsequent self-development activities they complete, and the level of
technical and organizational support provided to them. Youth propensity to enlist is
linked to advertising effects and environmental factors, such as economic conditions and
enlistment incentives. The research relating to each of these components of the recruiter
production model is presented and summarized in separate sections of this report.

Utilization of Findings:

This annotated bibliography documents published ARI recruiting research. The
recruiter production model around which the research reports are organized, along with
the abstracts summarizing key findings, should be useful for identifying where ARI's
research efforts have been directed in the past and for suggesting areas requiring
additional research.

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Introduction

This annotated bibliography describes research by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) on Army recruiting. ARI made available to us articles and technical reports, and the bibliography summarizes each of these reports.

The abstracts to follow are organized around a model of military recruitment (Figure 1). This model shows the important factors contributing to success in the Army recruitment process. The model should help us to place a framework on the research ARI has done on military recruiting.
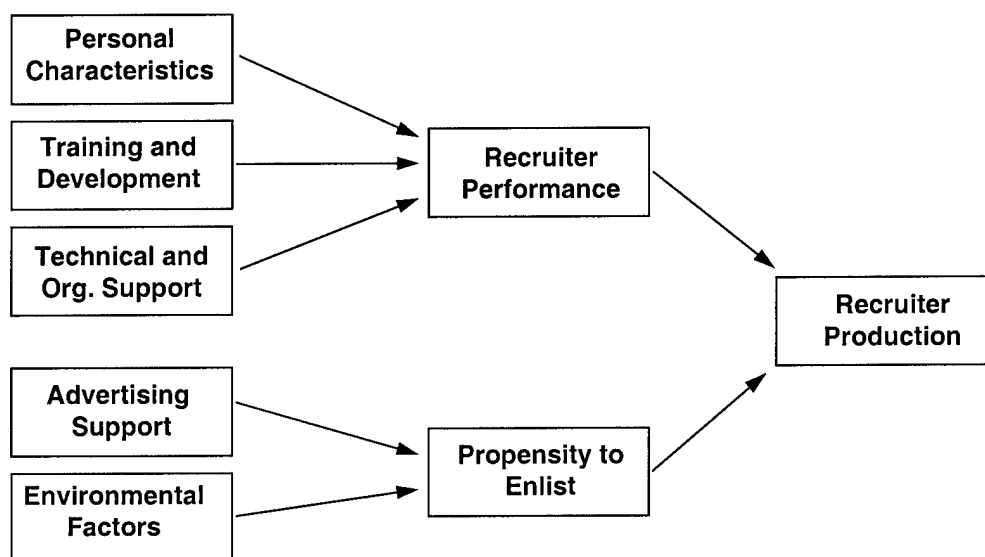
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Figure 1
Model of Military Recruitment

First, the box on the far right is the "bottom-line" effectiveness indicator, the number of successful recruitments accomplished per unit time. Moving to the left in the model, it shows that successful production is a function of both recruiter performance, i.e., the effort put forth by individual recruiters toward attracting qualified candidates, and the propensity for youths to enlist. In turn, recruiter performance is influenced by certain personal characteristics they bring to the recruiting environment, the initial training and subsequent development help they receive, and the technical and organizational support provided by the U.S. Army Recruiting Command (USAREC), and other organizational levels in USAREC (e.g., brigade or company). Finally, propensity to enlist is a function of local and national advertising support for Army recruiting and several environmental factors.

The model suggests where our attention should be directed to improve recruiter productivity. Going down the boxes on the left, first, identifying service members with "the right stuff" for success in recruiting may be useful. Second, training new recruiters and providing developmental experiences, as needed later in their tenure as recruiters, should enhance

performance and productivity. Third, technical support such as computerized systems to provide information on Army MOS, or databases to identify candidates likely to enlist, should be helpful. Together these three factors should contribute directly to recruiter performance.

Advertising may influence propensity to enlist in the Army. Both focused local advertising and larger scale, national campaigns can enhance propensity. Also, a variety of environmental factors probably have an impact on propensity to enlist. Such factors as unemployment rate, local population density, presence of a military facility nearby, traditional feelings toward the military, and ratio of military/civilian pay are examples of environmental factors. An important distinction between environmental factors and the other four factors in the model (i.e., person factors, advertising support, etc.) is that these four factors can be controlled by USAREC whereas the environmental factors cannot be as easily controlled. Thus, emphasis in determining the factors to focus on should be placed on these four factors. However, it will also be important to learn about environmental influences so that we know to what extent recruiter production *can* be enhanced by USAREC actions. Also, USAREC *can* have some impact on a few environmental factors through policy and missioning requirements.

We now review ARI research within each of these boxes to get a good perspective on what we know about Army recruiting and where gaps in our knowledge are evident. We begin with reports relevant to the Personal Characteristics box and work down and to the right of the model. Each section of the bibliography pertains to a different element of the model.

Personal Characteristics

Brogden, H. E. & Taylor, E. K. (1949). *The validity of recruiter selection instruments at various points of cut* (Report No. 781). Washington, DC: Personnel Research Section: U.S. Army Adjutant General's Office.

Article type: validation
Keywords: vocational interests, hobbies, background, recruiter productivity

- The authors used measures of vocational interests, and 3 measures tapping interests, hobbies, and background to create a battery to predict Army recruiter effectiveness.
- The 4 empirically-keyed scales were cross-validated using a sample of 475 recruiters and yielded a validity coefficient of .18 against a production criterion (average number of recruits brought into the Army by each recruiter per hour on recruiting duty).
- The authors reanalyzed the data using a turnover criterion that yielded a biserial validity coefficient of .36.
- The production criterion was criticized for having low reliability and possibly being contaminated with factors unrelated to recruiter effectiveness. Although the turnover criterion may also have been contaminated, it resulted in higher validity. However, it is possible that the predictors simply may have been better predictors of turnover than recruiter production.

Brown, G. H., Wood, M. D., & Harris, J. D. (1975). *Army recruiters: Criterion development and preliminary validation of selection procedure* (FR-ED-75-8). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

Article type: validation
Keywords: personality, environmental factors, recruiter productivity

- Against a composite supervisory nomination performance criterion (five best, five worst in each District Recruiting Command), very low validities were found for personality and aptitude scores, as well as for biographical items. (N=35 for Low criterion group & N=45 for High criterion group)
- The multiple regression of 12 territorial variables onto total recruiter production was also examined. Three variables [average production per recruiter in the subjects' District Recruiting Command (DRC), proportion of all enlistees in the DRC who chose the Army, and suburban proportion of the zone] significantly predicted production scores.

Borman, W. C. (1979). *Development of an assessment program for selecting Army recruiters.* (Technical Report 33) Personnel Decisions Research Institute: Minneapolis, MN

Article type: empirical
Keywords: personal characteristics

- This study details the identification of personal characteristics related to recruiter performance for use in developing assessment exercises for recruiter selection. Sources for the characteristics included job analyses, recruiter performance ratings, and a literature

review. Each characteristic was given an importance rating by 27 subject matter experts (SMEs).

- The final personal characteristics list consisted of Sociability, Personal Impact, Empathy, Behavioral Maturity, Organization, Work Orientation, Self-Control, Practical Judgment, Reading and Learning Ability, Energy Level, Persuasiveness, Resistance to Stress, Confidence, and Flexibility.
- The proposed assessment exercises were two Cold Calls, a Follow-Up Interview, a Speech about the Army, an In-Basket, an Interview with a Concerned Parent, and a Structured Personal Interview.

Borman, W. C. , Russell, T. L., & Skilling, N. J. (1986). *Development of behavior-based rating scales and analysis of recruiter selection battery data for the Army recruiter job.* (ARI Research Report 1441). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: empirical
Keywords: recruiter performance, personality, recruiter interest and background

- This was a two-part study. First, the authors developed behavior-based ratings scales to assess Army recruiter performance by revising the previous scales constructed for Navy recruiters (Borman, Dunnette, & Hough, 1976 in workshops with experienced Army recruiters).
- The 8 performance dimensions from the previous Navy study were found to be adequate in describing Army recruiter performance. However, the Navy scale definitions and behavior anchors required considerable revision to make them relevant for Army recruiters.
- The dimensions were: Locating and Contacting Qualified Prospects, Gaining and Maintaining Rapport, Obtaining Information from Prospects and Determining Their Needs and Interests, Sales Skills, Establishing and Maintaining Good Relationships in the Community, Providing Knowledgeable and Accurate Information About the Army, Organizing Skills, and Supporting Other Recruiters and USAREC.
- Second, the Army 's Experimental Recruiter Selection Battery (RSB-X), which contains personality and interest items from the Navy's Special Assignment Battery (SAB) was administered to 417 students in an Army recruiter course.
- The results for items common to the SAB were compared to the previous Navy sample using the 4 personality keys (Selling Skills, Human Relations Skills, Organizing Skills, & Overall Performance).
- A factor analysis of the RSB-X items produced results very similar to those obtained in the Navy study.
- Overall Performance means on the Navy key were not significantly different for the Army and Navy sample, although, Army recruiters had significantly lower means on Selling Skills and Human Relations Skills and a higher mean on Organizing Skills. However, the Navy sample consisted of recruiters with at least 6 months of experience, whereas the Army sample was comprised of students . Also, the Navy data was collected nine years prior to the Army sample.

Jacobson, S. (1987). *Sales Training for Army Recruiter Success: Interviews with excellent recruiters.* (Research Report 780). U. S. Army Research Institute for the Behavioral and Social Sciences.

Frieman, S. R. (1987). *Sales Training for Army Recruiter Success: Interviews with excellent recruiters.* (Research Product 87-37). U. S. Army Research Institute for the Behavioral and Social Sciences.

Frieman, S. R., (1987). *Sales Training for Army Recruiter Success: Modeling the Sales Strategies and Skills of Excellent Recruiters.* (Research Product 87-38). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: linguistic analysis
Keywords: sales strategies

- These reports detail a linguistic modeling procedure used to identify the selling strategies and styles of nine exceptionally high performing Army recruiters.
- The recruiters were interviewed (unstructured) and observed in role-playing and in the field interacting with prospects.
- Based on the interviews and a protocol analysis, the procedures and patterns used by the successful recruiters were summarized according to where they corresponded to the sales cycle: prospecting, qualifying, rapport, needs & interests, sales presentation, closing, and handling objections.
- The results indicated that the recruiters varied in their personal styles and there was no overarching theme linking them.

Benedict, M. E. (1989). *The soldier salesperson: Selection and basic recruiter training issues in the U. S. Army.* (Research Report 1534) U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: review
Keywords: selection, training, organizational factors

- The author reviewed research and practice in Army recruiter selection and training, pointed out problems and deficiencies, and made recommendations for addressing some of the problems. His findings are summarized below:
- Regarding recruiter selection, the Army did not use a selection test in the late 1980s for making recruiting assignments. Instead, the positions were filled by the Dept. of the Army (DA) assignment process. In addition, potential recruiters were eliminated from selection based on questionable criteria . For example, although recruiter performance has not been related to their performance in their previous MOS, soldiers who did not receive a favorable local Commander's evaluation were considered ineligible.
- The recruiter position was not highly esteemed or rewarded by the Army, and serving as a recruiter on a temporary basis, as opposed to converting their PMOS permanently, often had a detrimental effect on a soldier's career. These factors contributed to the lack of volunteer recruiters.

The author argued that the recruiter selection research, including the RSB-X, produced weak validities (about .20 or lower) against performance and production criteria. The only exception noted was Borman's (1982) assessment center which achieved high validities against training course criteria. Given the high selection ratio, none of these devices would provide sufficient predictive utility to justify their use.

- The Army Recruiter Course (ARC) received positive evaluations and was highly regarded by both students and instructors. However, recommended improvements included

increasing the realism of the telephone and interview simulations and preparing the students for the "real" world in terms of the demands for mission accomplishment and stress encountered when goals are not achieved.

- The weakest element of the training program was the Transitional Training and Evaluation (TT&E) program which was intended to serve as an on-the-job training program, but was not uniformly implemented and not integrated with the rest of the training programs.

- The author also identified organizational problems that may affect recruiter training and productivity. These included 1) Inadequate policies for selecting recruiters through the DA process; 2) Poor or nonimplemented training and coaching of newly assigned field recruiters; 3) Assignment of inexperienced recruiters as Station Commanders; 4) Supervisory personnel who are not familiar with or have not actually participated in the sales process for many years; 5) Use of negative reinforcement strategies to improve low productivity; and 6) Lack of personal responsibility by Commanders for individual recruiter's failures.

Weiss, H. M., Citera, M, & Finfer, L. (1989). *Evaluation of an Army recruiter selection program*. (Research Report 1514) U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: empirical
Keywords: personality, biographical information, productivity

- The Army Recruiter Selection Battery (RSB-X) was administered to 400 individuals in the Army recruiting course. The RSB-X elements and bio-data were correlated with production criteria collected one and two years later to determine the personal variables relevant for recruiter productivity.

- Six productivity indicators were used: Total Achievement (number of recruits signed in all categories), Total Production (number of recruits adjusted for mission), Total DEP Loss, Key Achievement, Key Production, and Key DEP Loss [Key criteria refer to the number of recruits in the four key categories of GMA (HS graduate male accessions), SMA (senior male accessions), GFA (HS graduate female accessions), SFA(senior female accessions)].

- Results suggested that the personality components had few significant correlations with productivity and few correlations were stable across years. The 4 Borman factors (Selling, Organization, Human Relations, and Overall Performance) also showed nonsignificant correlations with the productivity criteria.

- However, correlations were improved by using awards received as a criterion. Total Awards received for 1986-87 was significantly correlated with Exhibition (.21), Dominance (.17), Achievement (.13), and Authoritarianism (.26), all p's < .05.

- The bio-data results indicated that successful recruiters were less seasoned (younger, fewer years in service, lower pay grade at time of entry), have already received letters of commendation, attempted to lead by example rather than by driving people, had a spouse who didn't work, liked to plan activities rather than behave spontaneously, enjoyed parental support when growing up, and did not volunteer for recruiting duty.

- Because environmental or regional factors may have attenuated the correlations found, the average monthly battalion achievement and average monthly key achievement were selected as control variables. These corrections were entered into regression equations along with the 12 personality scales to predict total and key achievement. The R^2's for total achievement ranged from .06 to .07; only two partial correlations (out of 12) were

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significant. The R^2's for key achievement ranged from .08 to .10; only three partial correlations were significant.

Buchs, T. A. (1994). *Validation and justification of the use of a sales-aptitude test for U. S. Army recruiter selection.* Unpublished Master's Thesis, Navy Postgraduate School.

- The procedures and results of this study are discussed in the Taylor et al. reference below. This study pertained to the validation of the SCT on a sample of Army recruiters.

Taylor, J. G., Lindsay, G. F., Manager, B. K., & Weitzman, R. A. (1995). *Development of a model to predict recruiter success (initial results).* Naval Postgraduate School: Monterey, CA.

Article type: validation, empirical
Keywords: sales skills, cognitive ability, productivity

- This report describes a concurrent validity study of the Sales Comprehension Test (SCT) against an effectiveness criterion which weighted the percent of mission achieved by the percent of GSA (Graduate or Senior Category I-IIIA) and VOL (all categories of personnel who qualify to enter the Army including GSA) to account for recruit quality.
- Results indicated that the SCT was unable to distinguish between successful and unsuccessful Army recruiters (N=276).
- However, the SCT was able to distinguish between individuals who had prior sales experience and those who did not, as well as between recruiters and non-recruiters. Individuals with sales experience and recruiters had higher SCT scores than individuals without sales experience or who were not recruiters.
- In addition, the development of a multiple-linear regression equation to predict recruiter effectiveness was reported. The equation was developed on a sample of 71 and validated on 30. The predictors included the SCT and AFQT scores, Primary Military Occupational Status (PMOS - in this case, combat arms vs. non-combat arms), and gender and yielded a cross-validated R^2 of .11.

Hissong, J. B., & Plotkin, H. M. (1998). *Successful Recruiter Profile Project.* The United States Army Recruiting Command. Contract No. TCN 97-010, Scientific Services Program.

Article type: validation
Keywords: selection, recruiter performance

- The authors used the Prevue Aptitude Assessment which measures cognitive ability, interests, and personality variables, to predict recruiter success in a sample of 188 recruiters from five brigades.
- Recruiter success was measured by a combination of a production criteria (60% of final criterion score) and supervisor performance ratings on ten "success factors" (40% of final criterion score). The recruiters were ranked according to the criterion score and split into two groups of highly successful (N=86) and unsuccessful recruiters (N=102).
- Three Successful Recruiter Profiles were developed based on the pattern of scores of successful recruiters on each of the cognitive ability, interests, and personality dimensions.

Training And Development

Borman, W. C. & Fischl, M. A. (1981). *Recruiter assessment center: Candidate materials and evaluator guidelines*. (Research Product 81-10). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: assessment center materials and guidelines
Keywords: assessment center, training

- Assessment materials and evaluation guidelines for the six exercises designed to assess a candidate's potential as an Army recruiter are contained in this report.

Borman, W. C. (1982). **Validity of a behavioral assessment for predicting military recruiter performance.** *Journal of Applied Psychology, 67*(1). *See also* Borman, W. C. & Fischl, M. A. (1980). *Evaluation of an Army recruiter assessment program.* (Technical Report 57) Personnel Decisions Research Institute: Minneapolis, MN.

Article type: validation
Keywords: assessment center, recruiter performance

- The authors developed an assessment center to predict recruiter performance in training (N=57 students in Army Recruiter School).
- Three criteria from two phases of training were used: a composite score of 3 objective tests measuring mastery of prospecting and selling in Phase 1, instructor ratings of performance on telephoning and interview techniques in Phase 2, and time to complete the training program.
- Results indicated that ratings on the six exercises (2 Cold Calls, Interviews, Interview with Concerned Parent, 5-minute Speech about the Army, and In-Basket) correlated with the Phase 1 criteria (r's = .32 to .41, p<.05) and the weighted composite was significantly related to all 3 criteria (.48, .35, and -.33 respectively, and .53, .50, and -.49 corrected for attenuation).
- Ratings on the Structured Interview, Special Assignment Battery-Navy (Borman, Rosse, & Abrahams, 1980) and ratings of first impression, physical attractiveness, and likeability were not related to the training criteria.

Borman, W. C., Rosse, R. L., & Rose, S. R. (1982). *Predicting performance in recruiter training: Validity of assessment in the recruiter development center.* (Technical Report 73). Personnel Decisions Research Institute, Minneapolis, MN.

Article type: validation
Keywords: training performance, assessment center

- The Army Recruiter Assessment Program was developed to predict success in Army recruiting. This report describes a study of the validity of the program in operation as part of the Recruiter Development Center (RDC). (N=550 students in the Recruiter Course, rated by 15 experienced recruiters).

- The authors found significant, but low validities (in the .20's) of ratings on 4 assessment exercises (In-Basket, Speech Exercise, and Two Cold-Call Interviews), against training criteria [Army Recruiting Comprehensive Test (a job knowledge test), Phase 2 Telephone Rating, and Phase 2 Interview Rating].
- Training criteria suffered from restriction of range and low convergent validity. Also, the results were possibly due to the particular application of the RDC, which was used for developmental purposes. Assessors were responsible for motivating assessees in the exercises by assisting poor performers and challenging high performers.
- A prior study (Borman, 1982; p. 6) of the RDC had higher validities (.50's) when the center was used for assessment only. This development focus was very effective in motivating assessees to succeed in the school, but probably reduced the standardization for the assessment ratings.

Hull, G. L. & Benedict, M. E. (1988). *The evaluability assessment of the recruiter training program*. (Research Report 1479). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: research proposal
Keywords: recruiter training program

- This report outlines a proposed evaluation of the Army Recruiter Training Program.
- The proposed elements to be evaluated were a) the recruiter candidates, b) course content, c) instructional strategies, d) media and materials, e) instructors, and f) instructional environment. The authors also proposed examining two outcome variables: recruiter achievement and attitude.
- The proposed methodology to be employed consisted of observation, interviews with instructors and students, surveys, an audit of materials, comparing the official policies regarding selection of students and instructors and implementation of the training program to actual practice, and compilation of demographic information on students and instructors.

Hull, G. L., Kleinman, K., Allen, G., & Benedict, M. E. (1988). *Evaluation of the US Army Recruiting Command Recruiter Training Program*. (Research Report 1503). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: evaluation
Keywords: recruiter training program

- The evaluation proposed by Hull and Benedict (1988, above) was implemented and the results were outlined in this report.
- Data were collected from three groups: a sample of students who recently completed the course (N=152), a sample of past students (N=148), and 32 current instructors from the Recruiting and Retention School (RRS).
- In general, the course was rated favorably by students and instructors in terms of how well the course content prepared them for recruiting duty and the effectiveness of lecture and small group instructional strategies.
- Results also indicated that instructors delivered the course content effectively and were highly regarded by students. However, students and instructors expressed the need to

increase the emphasis on salesmanship skills, as well as coping with the pressure to make mission, rejection, and problems with friends and relatives.

- An interesting finding was that students who performed better on the training tests tended to rate the course less favorably overall than students who performed poorly on the training tests. However, this finding was reversed for the Recruiter Exercises, a simulation of work in a recruiting station, which the better performing students rated more favorably than poor performing students.

Chonko, L. B., Madden, C. S., Tanner, J. F., & Davis, R. (1991). *Analysis of Army recruiter selling techniques*. (Research Report 1589) U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: qualitative
Keywords: training, sales techniques, training, recruiter performance

- The purpose of this research was to identify and determine the effectiveness of selling techniques taught by the Army recruiter school and the actual practices of recruiters in the field in order to provide recommendations for improving recruiter effectiveness.
- The authors provide a review of several theories of selling and theories of buyer behavior to compare and contrast with the approach taught at the Army recruiter school.
- The researchers visited 14 Army recruiting stations chosen to be representative of the different demographic and geographic conditions nationally. They observed selling techniques and procedures and conducted interviews with the station commanders, recruiters, and sometimes with prospects.
- The basic sales model taught by USAREC is modeled after the needs-satisfaction approach to sales and includes: establishing rapport and credibility; determining goals, needs, and interests; determining qualifications; presenting features and benefits, and closing and handling objections.
- USAREC information suggested that, in order to develop sources of prospecting leads, recruiters need to understand the market segmentation (roughly whether prospect is looking for long-term vs. short-term career with the Army) and engage in community involvement (make friends, join community activities such as church and youth organizations, and talk about the Army to everyone).
- The researchers comment that the recruiting process used by USAREC has some problems. The model was based on the belief that the best way to acquire prospects is to contact as many people as possible in order to find those willing to 'buy'. Under difficult recruiting conditions, this belief leads to increased micro-management and pressure for more calls and paperwork to get results. Inherent in this model is a 99% rejection rate which recruiters say can be difficult to handle and should be addressed in training. Also, USAREC's requirements did not allow time for community involvement and establishing relationships although these activities were considered important. The model treats community leaders as sources of prospects and encourages partnering with community leaders. However, actual recruiter behavior was more akin to pressuring them for names.
- The authors suggested that these problems, in combination with the fact that most recruiters did not volunteer for recruiting, result in greater dissatisfaction and counterproductive activities, such as wasting time and materials and speaking negatively about the Army, which negatively impacts recruiting.

- It needs to be recognized that the process by which recruiters become involved in a community is long-term and requires rapport-building, partnering, listening, and community management skills.
- One manner in which successful recruiters deviate from established policy is by terminating prospects more quickly, or classifying prospects in a way that allowed them to spend more time with the more promising prospects.
- The authors recommended developing a system to classify prospects (possibly by the amount of time needed to close out the prospect) so that recruiters can utilize their time more effectively.
- Regarding the Army Recruiter Course, the consensus among recruiters and Station Commanders was that the course was useful, but new recruiters were more likely to adhere to the USAREC sales model than experienced recruiters. Suggestions for training included how to deal with rejection, stress management, administrative skills, and relationship building and networking.

Hull, G. L. & Nelson, W. A. (1991). *Instructional needs analysis of the US Army Recruiting Command (USAREC) on-the-job recruiter training program.* (Technical Report 1590). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: qualitative
Keywords: recruiter training, environmental/organizational factors

- On-the-job training (OJT) practices were examined in order to identify areas in need of improvement. Interviews were conducted with Station Commanders and recruiting Company personnel from 15 Battalions (N=243).
- The authors reported that, in general, OJT was neither standardized nor consistently applied across Battalions. The perception among recruiters and their Station Commanders was that commitment to training was low, recruiters lacked close supervision, didn't receive enough individualized feedback, and received too much negative feedback/pressure, especially regarding missions. They would like to see more training on sales and prospecting.
- Although personnel were generally positive about the Army Recruiter Course, they did not feel that it provided them with enough "real world" experience and were not prepared when the techniques they learned in class failed them on the job.
- Remedial training for 'zero-rollers' (recruiters with zero accessions for multiple months) and the Recruiter Assistance Program (RAP) were perceived as punishment.
- The authors provided program recommendations which included revising training with a focus on TTE (OJT), revising the recruiter selection process and criteria, instituting a formal orientation process, developing a paired-training or mentoring program, emphasizing training in the Station Commander course, and providing SC's with training materials.

Love, K. G., Jex, S. M., Richard, R. L., & McMullin, C. (1991). *Organizational assessment to support the USAREC On-the-Job (OJT) Recruiter Training Program.* (ARI Research Note 91-89). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: empirical, survey, interview
Keywords: organizational factors, training

- An organizational assessment of USAREC was performed in order to identify factors that affect training implementation and transfer of training for Army recruiters.
- Assessed via structured interviews of 50 Army recruiting personnel from the Brigade, Battalion, and Company level were the appropriateness of functional groupings (perceptions of various levels of USAREC), motivation and control systems (how members are motivated and controlled), impact of programs (e.g., training), and quality of life.
- Based on responses from the interview, a survey was developed and sent to a random sample of 765 NCO's at all levels of USAREC, except for HQ. The survey also included scales to measure job satisfaction, job frustration, and organizational commitment. The response rate was 52% (N=398). Fifty-four percent (54%) of this sample identified themselves as being volunteered members of USAREC.
- The authors reached several conclusions based on responses to the interviews and surveys. First, the organizational structure of USAREC does not support its mission well (e.g., all levels can make policy which results in information not being received in a timely fashion, too much information being passed down, and the receipt of conflicting information from different levels). These problems make it difficult for recruiters to do their job (e.g., too much paperwork, micromanagement).
- Second, the process by which missions are determined is problematic. Mission adjudication is perceived to be more like "mission assignment". The market analysis data missions were based on were questioned as being out-of-date. Missions were not perceived to be set equitably (e.g., often neglect factors that are beyond the control of recruiters; successful recruiters are better able to negotiate lower missions, whereas unsuccessful recruiters often have their missions raised).
- Third, far too much harassment and intimidation occurs under the guise of "motivation" or "training", especially zero-roller training. The authors speculate this is due to USAREC's extreme focus on mission accomplishment at the expense of individuals.
- Fourth, although the OJT programs are good, they are not effectively administered or given priority. Mission accomplishment and other administrative functions leave little time for OJT training. TTE was not implemented adequately due to mission requirements and inexperienced or poorly trained Station Commanders.
- Finally, there was much division, especially between Headquarters and the rest of command. Headquarters was perceived as being out-of-touch, unsupportive and staffed by individuals who have never been recruiters.
- Recommendations include (1) eliminating the Brigade level from the organizational hierarchy, (2) limiting officer involvement to Battalion and above (to eliminate micromanagement), (3) rotating personnel in USAREC (to keep NCO's in touch with recruiting life and to act as resources for new recruiters), (4) implementing Station-based missioning (it was successful in the past, would eliminate pressure on individual recruiters, and result in greater teamwork, job satisfaction, organizational commitment, and less frustration), (5) increasing lateral communication (should increase information exchange, and reduce perceptions of isolation and lack of support), and (6) focus on training skills of Station Commanders.

Pond, S. B., Powell, T. E., Norton, J. J., & Thayer, P. W. (1992). *Feasibility of using realistic job previews in the Army recruiter training process.* (Technical Report 1630). U. S. Army Research Institute for the Behavioral and Social Sciences.
Article type: review
Keywords: recruiter training, environmental/organizational factors

- Because the recruiter job has many negative characteristics (high stress, high pressure, unrewarding) and the job perceptions developed in training are unrealistic, the use of realistic job previews (RJPs) to aid in retaining Army recruiters and possibly to improve their performance was explored.
- The authors felt that RJPs would be useful as a 'bridge' between ARC and TTE to give recruiters a better idea of what to expect in the field and to help them deal with stress and other issues. Administering RJPs to the recruiter's spouse and Station Commanders (as a reminder of what its like to start out) may also help recruiters adjust more quickly to their new position.
- The authors suggested that RJPs could be most helpful early in the recruiter's job by clarifying performance issues, and making the transition into the job smoother. This should, in turn, reduce ambiguity and stress on the job, and perhaps aid in recruiter persistence on the job in the face of failure.
- However, the authors state that the Army would need to eliminate some of the negative job features of recruiting and specify the desired RJP outcomes in order for it to be effective.
- Suggestions for the development, implementation and evaluation of RJPs are discussed.

See also:

Technical And Organizational Support

Knapp, D. J. (1987). *Final report on a national cross-validation of the Computerized Adaptive Screening Test (CAST)*. (Technical Report 768). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: validation
Keywords: recruiter tools

- This report describes the validation of the CAST for predicting the quality of recruits.
- The CAST correlates .79 (N=5,909 Army prospects) with the AFQT, and is therefore recommended for use by recruiters as an initial estimate of prospects' AFQT scores.

Legree, P. J., Fischl, M. A., & Gade, P. A. (1997). *Estimating AFQT by telephone using a computer adaptive test.* (Technical Report 1058). U. S. Army Research Institute for the Behavioral and Social Sciences.
Legree, P. J., Fischl, M. A., Gade, P. A., & Wilson, M. (1998). Testing word knowledge by telephone to estimate general cognitive aptitude using an adaptive test. *Intelligence, 26(2), 91-98.*

Article type: validation
Keywords: recruiter tools

- The researchers found that using part of the computerized adaptive screening test (CAST) administered by telephone resulted in scores that correlated .66 with the applicants' AFQT scores (N=144).
- The items were comprised of the word knowledge portion of the CAST. Administration took 5-10 minutes.

McBride, J. R. & Cooper, R. R. (1999). *Modification of the Computerized Adaptive Screening Test (CAST) for use by recruiters in all military services.* (Research Note 99-25). U. S. Army Research Institute for the Behavioral and Social Sciences.

- This report describes the development of the CAST version 5.

See also:

Advertising

Brown, C. (1984). *Military enlistments: What can we learn from geographic variation.* (Technical Report 620). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: empirical
Keywords: pay ratios, unemployment, advertising

- A multiple regression, pooled cross-section/time-series model was used to determine the effects of pay, unemployment, educational benefits, and recruiting resources on the ratio of the number of contracts signed by male non-prior service (NPS) Army enlistees to the enlistment-age population.
- For high-quality enlistees, Military Pay and the Unemployment Rate impacted the enlistment rate. Having more Army recruiters in an area increases enlistments while the presence of recruiters from other services decreases enlistments. Advertising effects were mixed, but mostly positive.
- For other types of recruits, the results for each predictor were mixed.

Elig, T. W., Weltin, M. M., Hertzbach, A., Johnson, R. M., & Gade, P. A. (1985). *U. S. Army advertising from the recruits' viewpoint.* (Research Report 1407). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: survey
Keywords: advertising

- This report details results of the 1982 Department of the Army Survey of Personnel Entering the Army and the 1983 ARI Survey of Recruits administered to a sample of NPS accessions in the Army and Army Reserve (N=8,341).
- The surveys were designed to assess enlistment motivation, personal background, and media habits (e.g., TV viewing, music preferences, recall of specific advertisements).
- Comprehensive details regarding the responses for each item by demographic characteristics, such as gender, race, and AFQT scores were provided.
- Instances where advertising was successful were described. For example, high school graduates had higher recall of a direct mail campaign aimed at graduates than did non-graduates.

Howell, R. D., Wilcox, J. B., & Wilkes, R. E. (1988). *Modeling the effects of Army advertising.* (Technical Report 821). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: empirical
Keywords: advertising, recruit decision-making

- Researchers modeled the complex relationships among 12 constructs to explore the effects of Army advertising on beliefs, intentions, and enlistment behavior.

- Data on cognitive, affective, and behavioral variables related to advertising and the enlistment decision were collected in 30 minute interviews in 1986 and 1987 with a national sample of males (N=2,534) and the parent(s) of these youth (N=2,534). The data were collected as part of the ACOMS project.
- Using covariance structure modeling, the researchers determined that the perception of the Army by youths and their parents can be described by a general affect factor, plus 3 additional factors: beliefs about opportunities for personal development, beliefs about the Army experience itself, and beliefs about future opportunities arising from service. However, the Army attributes that were factor analyzed reflected attributes of the Army emphasized in advertising (e.g., chance to work with the latest hi-tech equipment) and may not have captured the factor structure of Army perceptions entirely.
- Enlistment activities were predicted by Social Influence (e.g., how others would feel if the youth joined the Army), knowledge of Army offers, and intentions to "do something about enlistment".
- Intention to engage in enlistment activities was predicted by knowledge of Army offers, liking of Army ads, and social influence.
- Other findings include: (1) parents have a significant impact on youth's enlistment decisions, (2) peers have a significant influence on youth's perceptions of the Army, and (3) recall of Army ads was related to hours spent watching TV.
- The authors concluded that Army advertising has been reasonably successful. Respondents to the survey tended to recall, like, and believe Army ads. These beliefs were related to favorable feelings about the Army that were related to intentions to take some enlistment action.

Baxter, S. & Gay, N. L. (1988). *The message content of advertisements for active Army enlistments.* (Research Report 1473). U. S. Army Research Institute.

Article type: focus groups
Keywords: advertising content

- Youth impressions of Army advertising were examined by having 3,665 16-to-24 year old males and females view Army video and print ads. Participants were contacted in urban shopping malls, shown ads, and participated in a 15-minute interview conducted as part of the ACOMS project.
- Results indicated that unaided recall of Army ad sponsorship was 86.5% for video and 78.8% for print ads.
- Different attributes of the Army were recalled for the different media. The attributes perceived most frequently in video ads were the presence of high-tech equipment, experience to be proud of, and the opportunity to develop one's potential. For print ads, money for education and pride in the experience were perceived most frequently.
- Males and Whites perceived the ads communication objectives more frequently than females, Blacks and others in both the video and print ads.
- The authors noted that the ads appeared to convey their intended message, but an adventure and excitement attribute could be added.

Elig, T. W. (1988). *Targeting the delivery of Army advertisements on television.* (Research Report 1484). U. S. Army Research Institute for the Behavioral and Social Sciences.
Article type: survey

Keywords: advertising

- The media habits of a sample of 1,847 16-21 year old males and an overlapping sample of 1,676 18-24 year old males were assessed as part of telephone interviews conducted for the Army Communications Objectives Measurement System (ACOMS) project.
- This report describes the TV viewing and radio listening habits of this group in order to direct future advertising initiatives.
- For example, the ARI researchers found racial differences in self-reported television program viewing. They also found that more high school graduates watch Monday Night Football and college football than non-high school graduates. However, these results are over 10 years old and may need to be updated.

Baker, T. A. (1990). *A cross-sectional comparison of Army advertising attributes.* (Research Report 1578). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: quantitative, factor analysis
Keywords: advertising

- This research was aimed at identifying the impact that advertising had on perceptions of Army opportunities among youth, new soldiers and experienced soldiers.
- Advertising attribute items (which assessed perceptions of available opportunities in the Army) from the New Recruit Survey (NRS; 18 items, N not stated), Recruit Experience Tracking Survey (RETS; 14 items, N=4256 active Army soldiers), and the Army Communications Objectives Measurement Survey (ACOMS; 13-14 items, N=24,488 active Army NPS soldiers and N=12,955 16-to-24 year old youth) were examined and factor analyzed. Data were collected between 1986-1989.
- A factor analyses of the NRS items yielded three factors: Self-Improvement, Work-Related (work aspects in the Army), and Women's Benefits (opportunities and benefits for women). The RETS yielded two factors (Self-Improvement/Education and Work-Related) and the ACOMS yielded one factor for the Army, Navy, Air Force, Reserves and National Guard samples (General Opportunity) and two factors for the Marine Corps (Self-Improvement and Work/Education).
- Comparisons between groups indicated that new soldiers (NRS) and youth (ACOMS) perceive more opportunities in the Army than experienced soldiers (RETS). However, the authors note that the responses of the new soldier samples may have been influenced by recruiter contact or Army experiences as well as by advertising.
- Respondents saw aspects of self-improvement and money for education as opportunities that the Army offered. Work-related opportunities were not as positively regarded as self-improvement opportunities. The authors recommended that ads for the Army focus on Army as a positive step between high school and college in addition to work-related opportunities.

Environmental Factors

Horne, D. K. (1984). An economic analysis of Army enlistment supply (MPPRG Report 84-5). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: economic analysis
Keywords: economic factors, advertising, educational benefits

- The authors used multiple regression to forecast the number of high quality males available in the future by assessing the impact of several economic variables on quarterly enlistment, as indicated by the number of contracts signed from FY1977 to FY1984.
- Results indicated that unemployment rate, military pay rate, ratio of number of recruiters to number of eligible 16-21 year old males, national advertising expenditures, and educational benefits all had significant effects on the number of contracts signed.

Dale, C. & Gilroy, C. (1985). Enlistments in the all-volunteer force. *American Economic Review 75*(3), 547-551.

Article type: economic analysis
Keywords: economic factors, enlistment incentives

- The usefulness of two different criteria, the number of contracts (applications to enlist) signed per month and the number of accessions (number of recruits who begin their enlistment period) per month were compared in modeling the effects of several economic factors on the enlistment decision. Monthly contract and accession data from October 1975 to September 1982 were used.
- Because accessions data demonstrate strong seasonality, as recruits may sign an enlistment contract at any time during the school year but report for duty (access) predominantly in the summer, the authors believed the contracts criterion would be more useful.
- The variables included in the regression were the unemployment rate, the ratio of military to civilian pay, three variables to measure the different educational benefits available over the course of the study (e.g., GI Bill, Veterans' Educational Assistance Program), recruiter effort (a binary variable representing November 1979 to August 1981, a period of special recruiting policies targeted toward high school graduates and the remaining time periods, October 1975 - October 1979 and September 1981 - September 1982), and a seasonal dummy variable.
- Two regressions per criterion were performed, one using a 1-month lagged (i.e., data from one month previous) term for the wage ratio variable, and one using a 4-month lead term (i.e., data from four months ahead).
- Results indicated that overall, the contracts criterion produced better results than the accesssions criterion and the leading wage term produced better results than the lagged wage term.
- The regression using the 4-month lead term and the contracts criterion produced the best results (R^2=.81). All predictors in this equation were significant ($p<.05$).

Dale, C. & Gilroy, C. (1985). Determinants of enlistments: A macroeconomic time-series view. *Armed Forces and Society, 10*(2), 192-210.

Article type: economic analysis
Keywords: economic factors, enlistment incentives, number of recruiters

- The authors explored the usefulness of economic (unemployment rate, ratio of military to civilian pay with a 4-month lead, enlistment bonuses and educational benefits) and non-economic factors (number of recruiters and recruiter effort) in predicting Army enlistment as indicated by the number of contracts signed monthly - accessions plus DEP contracts. The same data set as the above Dale and Gilroy article was used in this longitudinal study.

- Results indicated that the unemployment rate and ratio of military to civilian pay had the strongest impact on enlistment rates.

- Although the actual number of recruiters did not significantly influence enlistment, recruiter effort, as indicated by a binary variable representing a period of special recruiting policies targeted toward high school graduates, was significant. However, the findings for number of recruiters may have been negative as a result of a 1978 Army policy that required more recruiters be assigned to areas with low enlistment rates.

- Educational benefits, such as the GI Bill and the Veterans' Educational Assistance Program (VEAP), had a significant effect on enlistment rates of males of a higher mental category (CAT I-IIIA on the AFQT). Enlistment bonuses for enlistees who enter critical specialties in combat arms also had a significant impact for this group.

Phillips, C. E. & Schmitz, E. J. (1985). A microdata model of delayed entry program (DEP) behavior. (Research Report 666). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: economic analysis
Keywords: DEP, demographic characteristics of recruits, enlistment incentives

- The authors used maximum likelihood logistic regression to model the effects of several variables on DEP loss behavior.
- Results indicated that DEP length, gender, and age were the strongest predictors of DEP loss. As DEP length and age of the applicant increased, the probability of DEP loss increased. (However, the authors noted that longer DEP periods were associated with lower attrition rates.) Females were also more likely to leave the DEP program.
- Although AFQT score, enlistment incentives (e.g., Army College Fund, enlistment bonus), and enlistment options (e.g., training of choice, station of choice) were included in the regression, they were not significantly related to DEP loss.
- Subsequent comparisons of high school seniors, graduates, and high school drop-outs revealed that overall, high school seniors had lower loss rates than high school graduates or non-high school graduates. Male high school seniors had the lowest loss rate while female high school graduates had the highest.
- The authors suggest that recruiters could use these data to target individuals at highest risk for DEP loss for increased monitoring during the DEP period.

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Daula, T. & Smith, D. A. (1986). Recruiting goals, enlistment supply, and enlistments in the U.S. Army. In C. L. Gilroy (Ed.), *Army Manpower Economics* (pp. 101-126). Boulder, CO: Westview Press.

Article type: economic analysis
Keywords: enlistment supply; policy

- The authors developed a method to estimate enlistment supply that incorporates recruiting goals and interservice and intraservice competition for recruits. Their modeling technique distinguishes between a supply-constrained (number of high-quality male enlistments are lower than the enlistment goals) and demand-constrained recruiting (the number of high-quality male enlistments are equal to or higher than the recruitment goals) environments.
- They examined how relative military compensation, socio-demographic factors (population of high quality recruits, race, and percent of the population who voted Republican), unemployment rate, enlistment competition (between services and intra-Army), number of recruiters, and advertising (general impressions of advertising and local advertising expenditures) influenced enlistment supply.
- The model was estimated using a time-series cross-sectional data set including monthly information from the Army's 56 recruiting districts from 1980 through 1983.
- The major determinate of enlistment supply was the unemployment rate. The authors also concluded that the supply of high-quality enlistees was quite sensitive to changes in the civilian labor market. They also concluded that competition among services impacts the number of high quality recruits available to the Army. They estimated that for every two additional youths recruited by the Air Force, Navy or Marines, the Army loses one recruit.

Goldberg, L. & Greenston, P. (1986). Economic analysis of Army enlistments: Policy implications. In C. L. Gilroy (Ed.), *Army Manpower Economics* (pp. 61-91). Boulder, CO: Westview Press.

Article type: economic analysis
Keywords: enlistment supply; policy

- The authors used a time-series cross-section model to estimate Army enlistment supply for FY 1976-1983. Regression analyses were used to estimate the effects of several variables on the number of contracts signed for each service in 41 Navy Recruiting Districts.
- The variables included in the model were demographic factors (high school senior and graduate population, race, urban/rural population), recruiting resources (number of recruiters from each of the four services per population), policies (e.g., changes in Air Force and Marine Corps recruiting goals and standards), and economic factors. Economic variables included military pay (relative to civilian pay), civilian unemployment, and GI Bill benefits.
- The authors found that enlistments increased with relative military pay, cyclical unemployment, regional unemployment, total high school senior and graduate population, urban population, and the number of recruiters. Enlistments declined with Black populations and the loss of GI Bill benefits. The authors also examined the effects of these same variables within each of the DOD occupational area codes. The results were similar to the overall results reported above.

- The authors suggested that this methodology would provide the capability to estimate the enlistment supply and would yield valuable information on the impact of policies on enlistment supply.

Nelson, A. (1988). *Delayed Entry Program (DEP) loss behavior.* **(Technical Report 823). U. S. Army Research Institute for the Behavioral and Social Sciences.**

Article type: empirical
Keywords: unemployment rate, DEP

- The DEP is a recruiting mechanism used by all of the services that allows individuals to sign an enlistment contract and to delay reporting for active duty for up to 12 months. Losses from DEP have become a problem. The author developed 2 models of DEP loss.
- A time-series model was estimated using FY1984-87 data to examine the contribution of various factors to DEP loss. Results indicated that the youth unemployment rate, average DEP length, and number of DEP's per recruiter all had a significant influence on DEP loss, $R^2 = .70$ (all coefficients p<.01). The estimated regression equation indicated that a decline in the youth unemployment rate accounted for 39% of the DEP loss rate increase between FY86 and FY87.
- The second model used logistic regression to determine the factors that influence an individual's DEP loss behavior. Results indicate that DEP length and age are positively related to DEP loss. The DEP loss probability increases at a steady rate for HS seniors, but increases substantially after 6 months for HS graduates. AFQT score was negatively related to DEP loss, that is, the higher the AFQT score, the less likely they would become a DEP loss.

Verdugo, N. & Berliant, K. R. (1989). *Estimating the Army's prime recruiting market.* **(Research Report 832). U. S. Army Research Institute for the Behavioral and Social Sciences.**

Article type: survey
Keywords: recruiting market

- Based on data collected from the Census Bureau, Department of Education, DOD, and Veterans Administration, the authors predicted that the prime recruiting market for the Army would decrease by roughly 21% between 1985 and 1995, suggesting that Army recruiting would be more difficult in the 1990's.
- The prime market was defined as 17-21 year old males who score in the upper half on the AFQT, are HS graduates, are morally and physically qualified for military service, have not been institutionalized, are not in military service, have no prior service, and are not in college.

Recruiter Performance

Borman, W. C., Toquam, J. L, & Rosse, R. L. (1976). *Dimensions of the Army recruiter and guidance counselor job.* (Technical Report 10) Personnel Decisions Research Institute: Minneapolis, MN.

Article type: empirical
Keywords: recruiter performance

- This study detailed the use of multidimensional scaling and a clustering technique to identify the dimensionality of Army recruiter and guidance counselor job tasks.
- The results indicated four broad dimensions: Prospecting Activities, Publicizing the Army, Selling the Army, and Administrative Activities.

Russell, T. L. & Borman, W. C. (1986). *Predicting military recruiter effectiveness: A literature review.* (ARI Research Note 87-23) U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: literature review
Keywords: productivity, performance

- This report summarized the research on recruiter effectiveness focusing on studies regarding supervisor ratings of performance, productivity criteria, environmental variables that impact production, and recruiter success in training. All of the studies reviewed are discussed in this annotated bibliography.

Weiss, H. M. (1988). *Evaluation of recruiter performance measures and policy.* (Research Report 1485). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: qualitative
Keywords: recruiter performance

- In order to examine the usefulness of the RSB-X in predicting recruiter performance, possible criteria for recruiter success were explored.
- The researchers met with Army personnel at Ft. Sheridan and at the Recruiting and Retention School at Ft. Benjamin Harrison. In addition to USAREC staff members, discussions were held with the USAREC Chief of Staff and several other Directors.
- The general consensus was that the primary indicator of recruiter success was mission accomplishment and whether they accomplished their mission while adhering to explicit rules and regulations.
- Other supplemental measures of performance were "zero rollers" (recruiters who consistently fail to enlist any recruits), performance awards, DEP loss, and relief from recruiting (possible reasons for being relieved included ineffective, unqualified, and unsuitable).

See also: Borman, Russell, & Skilling (1986) on page 4
Hissong & Plotkin(1998) on page 7

Propensity To Enlist

Dale, C. & Hill, L. G. (1984). *Military and civilian lifetime earnings comparisons.* (Technical Report 619). US Army Research Institute for the Behavioral and Social Sciences.

Article type: survey
Keywords: military to civilian pay ratio

- From the abstract: "Life cycle earnings comparisons (were) made for several categories of Army personnel and civilians. The results show that as of the end of FY1982, many Army personnel are underpaid relative to civilians, especially in highly technical occupations. The results hold even when the analysis includes military housing allowances and commissary privileges, and tax advantages."

Elig, T. W., Johnson, R. M., Gade, P. A., & Hertzbach, A. (1984). *The Army enlistment decision: An overview of the ARI recruit surveys, 1982 and 1983.* (Research Report 1371). U.S. Army Research Institute for the Behavioral and Social Sciences.

Article type: survey
Keywords: enlistment

- During two excellent years for recruiting, 1982 and 1983, NPS Regular Army (RA) recruits (N=6,318 in 1982 and N=8,341 in 1983) were surveyed in the Spring and Summer to find out why they enlisted and what advertising and recruiting practices were related to their decision. The findings were compared to a DOD survey from 1979, a bad recruiting year.
- The authors reported decreases from 1979 to 1982 in the percentage of respondents indicating as their primary enlistment motive self-improvement (39% to 30%) and skills training (26% to 20.5% for Spring 1982, but it increased to 35% for Summer '82), while money for college (7% increased to 17.5%) and escaping unemployment (4% to 10%) motives increased.
- The availability of a 2-year enlistment contract, as opposed to 3 and 4-year options served to have an impact on enlistment. The authors reported that 57% of recruits would not have enlisted if there was no option of a 2-year contract.
- The Army College Fund (ACF) also influences enlistment. The authors report that 35% of recruits eligible for the ACF would not have enlisted if it was not available and 13% of ACF-eligible recruits enlisted in hard-to-fill MOSs in order to receive ACF benefits. These findings were especially important as recruits eligible for the ACF are of higher quality since they are college-bound.
- Analyses of the TV viewing habits of recruits suggests that NFL and college football games would be a good choice for advertising spots due to their large appeal across demographics. However, these results are 15 years old and may need to be updated.

Friedland, J. E. & Little, R. D. (1984). Educational levels, aspirations, and expectations of military and civilian males, ages 18-22. *Armed Forces and Society, 10*(2), 211-228

Article type: survey
Keywords: propensity to enlist, recruit quality, education

- Based on data collected as part of the National Longitudinal Survey in 1979 (N=6,398), the authors explored differences among White, Black, and Hispanic military and civilian males regarding their education levels, as well as their aspirations and expectations for attaining future education.
- Results indicated that White military males averaged fewer years of education than their civilian counterparts. In contrast, Black and Hispanic military males averaged more years of education than their civilian counterparts. These differences remained significant (p<.01) after males with college experience were excluded from the civilian sample.
- Military males, regardless of race, had higher aspirations and expectations of completing additional education than civilian males. In addition, military males were more likely to expect to be in school five years in the future. However, the authors noted that while this finding could indicate the seriousness of their intents, it could also reflect the fact that individuals in the military are more likely to delay their education compared to civilians.
- A comparison of the three main service branches indicated that Army servicemen had lower education levels and aspirations than servicemen in the Navy, who in turn had lower education levels than servicemen in the Air Force.
- Because these results suggested that the military appeared to be attracting high quality individuals, as indicated by their educational aspirations and expectations, the authors felt that reinstituting the GI Bill would be of questionable utility for attracting high quality recruits, but would be more useful for increasing retention. However, these results are based on data that are 20 years old and the differences between military and civilian males on these variables have likely changed.

Schmitz, E. J. & Nelson, A. (1984). **Modeling the enlistment process for personnel planning. (Research Report 1416). U.S. Army Research Institute for the Behavioral and Social Sciences.**

Article type: quantitative analysis
Keywords: enlistment process

- The researchers examined the flow of personnel through the enlistment process, from initial application to accession, in order to project future accessions from applicant flow.
- Personnel proceed through the enlistment process by passing the following hurdles: a) application, b) mental qualification, c) physical qualification, d) sign contract (either directly enlist or enter DEP), and e) accession/begin enlistment period.
- From FY81-FY82, 55% of the 765,673 individuals who completed an application met the mental and physical requirements and 69.4% of those qualified signed an enlistment contract. Thus, 38.2% of those who applied actually signed a contract.
- Only a small percentage of enlistees (1.8%) directly enlisted (i.e., began their enlistment period immediately after they signed their contract); the remaining enlistees entered the DEP program. Ten percent of enlistees in DEP failed to access.
- The time between completing the initial application and signing a contract ranged from 0-365 days. More than half (52.6%) of applicants signed a contract within one week of completing an application.
- Other analyses indicated that White applicants and applicants in higher AFQT categories were less likely to enlist than non-White applicants and applicants in lower AFQT categories.

Nord, R. D., Schmitz, E. J., & Weiland, T. A. (1986). *Propensity and the enlistment decision.* (Research Report 723). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: empirical
Keywords: propensity to enlist

- The authors attempted to model the relationship between propensity and enlistment behavior by examining several factors including socio-demographic characteristics and educational expectations.
- The data were taken from the National Longitudinal Survey of Labor Force Experience, Profile of American Youth sample. This survey followed a sample of 12,686 youth age 14-22 from 1979-83. Of the sample, 655 joined the military.
- Logistic regression results indicated that propensity to enlist most strongly predicts enlistment behavior. Males, Blacks, and individuals wanting additional training outside of school were all more likely to enlist than females, Whites, and individuals who did not want additional training. Individuals who had a strong negative intent to enlist were less likely to enlist than individuals who expressed mildly negative intent.
- The findings also indicated that enlistees experienced an increase in educational expectations. It could have been that their high expectations lead to enlistment, or the increase may have come about as educational benefits were discussed in the enlistment process.
- Also, enlistees didn't always enlist in the service in which they intended to enlist. Although all Air Force enlistees had intended to enlist in the Air Force, most Navy recruits had intended to enlist in the Air Force, and most Army recruits had intended to enlist in the Navy.
- The AFQT showed a curvilinear relationship with enlistment rates, where enlistment rates declined above an AFQT percentile of 55 after propensity was controlled. The authors note that these results suggest that, in addition to simple propensity, enlistments are affected by the labor market and educational opportunities.

Pliske, R. M., Elig, T. M., & Johnson, R. M. (1986). *Towards an understanding of Army enlistment motivation patterns.* (Research Report 702) U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: survey
Keywords: propensity to enlist

- A survey was conducted to determine the psychological and economic factors that affect enlistment motivation. The sample included 6,318 non-prior service regular Army (NPS RA) recruits in 1982 and 8,605 NPS RA recruits in 1983 (same data as Elig et al., 1984; p. 17) who were surveyed at Army reception stations across the country.
- A principal components analysis (PCA) of the survey responses indicated six factors: Self-Improvement, Economic Advancement, Military Service (includes service to country, be a soldier, benefits), Time Out (includes escape personal problems and take time to decide future plans), Travel, and Education Money.
- The authors generated factor scores for each recruit based on an orthogonal PCA in order to determine the impact of demographic variables on each factor. The factor scores were used

as dependent variables in six ANOVA's (one for each factor) which used demographic variables as independent variables.

- The following demographic variables all had a significant effect on the factors (the authors report p's <.001 for the first factor, but no other p's are mentioned for the other factors).
- Females were more likely to cite Self-Improvement, Travel and Education Money, while males were more likely to cite Military Service and Time Out.
- Recruits with higher AFQT scores were more likely to weight highly Education Money, while recruits with lower AFQT scores were more likely to weight Time Out, Economic Advancement, and Self-Improvement.
- Regional differences were also found. Recruits from the Southeast were more likely to cite Economic Advancement and Military Service. Recruits from the Midwest were more likely to cite Travel and Economic Advancement. Recruits from the West were more likely to cite Self-Improvement and Travel and recruits from the Northeast were more likely to cite Travel.
- Recruits who weighted highly Education Money were more likely to sign for a 2-year term, while those who weighted Military Service were more likely to enlist for a 4-year term.

Benedict, M. E. (1987). The 1986 ARI survey of U.S. Army recruits: Technical Manual. (Technical Report 735). U.S. Army Research Institute for the Behavioral and Social Sciences.

Article type: technical manual
Keywords: New Recruit Survey

- This is one of eight reports documenting the 1986 New Recruit Survey (NRS). The NRS was designed to assess the attitudes, knowledge, personal characteristics, and enlistment motives of new Army recruits with the purpose of determining the most effective recruiting practices.
- The NRS was first conducted annually from 1982-1983 and twice a year beginning in 1983. The 1986 survey contained items from previous years, as well as new items regarding awareness and interest in ROTC, and enlistment incentive programs, intentions to use the Army to obtain training and skills for future civilian employment, and opinions about new television programming.
- This volume describes the project background, instrument development and content, sample design, survey administration, database development, and documentation.

Zirk, D. A., McTeigue, R. J., Wilson, M., Adelman, L, & Pliske, R. (1987). *Alternative approaches to modeling the individual enlistment decision: A literature review*. (Research Report 738). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: literature review
Keywords: propensity to enlist, decision-making

- Various theories and models from psychology and career and consumer decision-making research were reviewed to determine the model(s) most appropriate to use for investigating the individual enlistment decision.
- The authors decided that the Fishbein-Ajzen Expectancy Theory model was best because it (1) has behavioral intent as the dependent variable, (2) accounts for social and cognitive

influences, (3) includes an affective component; and (4) it "facilitates a multimeasurement approach for triangulating on decision model components ."

Wilson, M. J., Gay, N. L., Allen, B. F., and Celeste, J. F. (1988). *The Army enlistment decision: A selected annotated bibliography.* (Research Note 88-65). U.S. Army Research Institute for the Behavioral and Social Sciences.

Article type: annotated bibliography
Keywords: economic studies, enlistment decisions, propensity to enlist

- The authors summarized marketplace/economic and motivational studies regarding the enlistment decision.
- Overall, the authors found that the literature on military/civilian pay ratios produced mixed results.
- Patriotism, family tradition, challenge, duty to one's country, and the chance to better oneself were identified in several studies as reasons for youths to consider Army enlistment. Economic factors such as unemployment, training for civilian employment, and enlistment bonuses also appear to influence Army enlistment motivation.

Wilson, M. J. & Perry, M. S. (1988). *The career decision survey: Modeling the Army enlistment decision.* (Research Report 814). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: quantitative, survey
Keywords: propensity to enlist, decision-making

- The authors found support for Fishbein and Ajzen's theory of reasoned action in modeling the enlistment decision.
- The Career Decision Survey, designed to measure beliefs and evaluations of career choice outcomes, affective reactions to career choice attributes, social norms (parents and peers) and motivation to comply with those norms, social influences on career choice (what important others think I should do), and career intentions (Army, college, or job), was administered to a sample of 17-20 year old youth.
- Although the sample was large (N=1,046), it was not representative of youth nationally (78% of the sample came from the Army Lead Refinement Lists and thus, most of the sample may have been actively pursued for recruiting or had inquired about the Army).
- The authors regressed the aforementioned variables onto career intentions (Army, college, and job) and were able to explain between 46% and 61% of the variance in each criterion.
- For each criterion, the predictors with the largest standardized beta weights were attitudes toward the career choice (β's ranged from .29 to .37) and social influences on career choice (β's ranged from .35 to .54)

Kearl, C. E., & Nelson, A. (1990). *Delayed Entry Program (DEP) attrition: A microdata model.* (Technical Report 889). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: empirical
Keywords: DEP loss, economy, unemployment, recruitment tools, recruit characteristics

- This research was an extension of the Nelson (1988, p. 15) study. Using binary logistic regression, the authors estimated the effects of personal characteristics (age, gender, race, dependent status, high school status and AFQT score), recruiting tools (DEP length, Army College Fund, enlistment bonus, and term of enlistment), and economic factors (unemployment rate, relative military/civilian wages) on DEP loss during FY86-87 (N=234,514).
- Results indicated that the personal characteristics of DEP recruits had the largest influence on DEP loss. Those at high-risk of being a DEP loss were more likely to be older, female, White, without dependents, and without a high school diploma.
- Environmental factors also influenced the DEP loss rate. The authors stated that the economy strongly influences DEP loss and enlistment incentives (Army College Fund, enlistment bonus, increased training) had a small but significant impact on DEP loss.
- The length of DEP also contributed to attrition. The longer the DEP, the more likely a recruit would be a DEP loss.

Schmitz, E. J. (1990). *The Army College Fund and military manpower: A review of existing research*. (Technical Report 1572). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: literature review
Keywords: enlistment incentives

- The author reviewed relevant literature to determine the effects on enlistment behavior, occupational choice and retention of the Army College Fund (ACF), as well as the cost-effectiveness of the ACF.
- Econometric and survey research indicated that the ACF has increased enlistments among males eligible for the program. However, little or no research has been conducted regarding the occupational choice effects and retention effects of the ACF.
- In sum, the authors concluded that the ACF appears to be a cost-effective program.

Tarver, S. M., Miller, A. E., & Ginexi, E. M. (1994). *A qualitative evaluation of reasons for enlisting in the military: Interviews with new active-duty recruits*. Arlington, VA: Defense Manpower Data Center, Program Evaluation Branch.

Article type: qualitative, interviews, focus groups
Keywords: propensity to enlist

- The authors conducted interviews and focus groups with 200 enlistees in 1990 and identified eight "frequently mentioned motivations underlying... the enlistment decision." They were as follows:
- Historical interest, self-improvement, job/skill training, money for education, floundering (lack of goals/direction), time-out (to develop a career/life strategy or plan), get away/escape, no other jobs/prospects.
- Other factors cited, but less frequently, included service benefits, enlistment incentives, opportunity to travel, and recruiter behavior (positive & negative).

Hughes, A. O. & Khatri, D. S. (1996). *Exploratory research on African-American youth's propensity to join the military.* (ARI Research Note 96-12). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: qualitative, interviews
Keywords: enlistment propensity

- One hundred African-American juniors and seniors (not randomly selected) from a Washington, DC high school were interviewed by either a male or female African-American adult nominated as well known and liked by the students, to identify factors that affected their interest in the military.
- Results indicated that 75 of the students planned to attend college or technical school after high school and only 9 intended to join the military or ROTC. However, those 9 students cited educational benefits as one of their principal reasons for joining.
- None of the suspected reasons for low propensity (racial discrimination, fear of the unknown, diminished educational benefits) were mentioned by members of the sample.
- However, these results should be viewed cautiously, as the students were chosen by the interviewers and none of the students refused to participate. The authors also suspected the students may have been giving socially acceptable answers.

Lawrence, G. H., & Legree, P. J. (1996). *Military Enlistment Propensity: A review of recent literature.* (ARI Research Note 96-69). U. S. Army Research Institute for the Behavioral and Social Sciences.

Article type: literature review
Keywords: propensity to enlist

- A review of enlistment research found that the majority of studies typically identified 4 or 5 motivational factors: (1) personal character and strength, (2) step back from life, gain new perspective, (3) pragmatic - view service as means to an end (e.g., money for college, training, etc.), (4) desire to serve others, and (5) escape from problems, usually environmental or economic.
- The primary decision influencers were parents, especially fathers. Friends and relatives associated with the military were also frequently mentioned.
- Direct influencers of the enlistment decision included financial inducements (pay, bonuses), educational benefits (ACF), unit assignment, and career commitments. The authors note that USAREC often has little control over these factors.
- Indirect influencers of the enlistment decision included patriotic appeals, coming-of-age, comradeship, self-worth, quest and adventure, and escape from boredom or problems. The authors state that the Army has more control over these factors, particularly through advertising.

Nieva, V. F., Wilson, M. J., Norris, D. G., Greenlees, J. B., Laurence, J., & McCloy, R. (1997) *Enlistment intentions and behaviors: Youth and parental models.* (Contractor Report 97-13) US Army Research Institute for the Behavioral and Social Sciences.

Article type: empirical, CSM
Keywords: propensity to enlist

- The authors tested Fishbein & Azjen's theory of reasoned action in predicting youth enlistment behavior using data from the ACOMS survey (N=2,731 pairs of young men ages 16-20 who were HS graduates or currently enrolled in HS or college and had not previously served in or been accepted for military service, and their parents surveyed in 1986-88). Participants were identified from random digit dialing.
- Data were collected using items from the ACOMS survey, which was originally written to assess the effectiveness of Army advertising efforts. Although the Fishbein & Azjen theory states that the attitudes assessed should be directed toward the behavior (enlistment), attitudes towards the Army were used instead (e.g., perceptions of what the Army offers x perceived value).
- Using LISREL, a model of youth Army enlistment was tested. Model results indicated that attitudes towards the army (.29), perceived parental approval (.44), approval of similar others (i.e., peers) (.28), work intentions (.18), college intentions (-.40), behaviors leading to work (-.12), behaviors leading to college (-.58), and behaviors leading to Army enlistment (.32) directly influenced intent to enlist in the Army which, in turn, directly influenced enlistment behavior (.48).
- A model linking youth enlistment with parent knowledge, preference and communications regarding the Army was also tested. Parent communication was hypothesized to directly influence enlistment behavior and its coefficient was .39 in the linked model.
- The $\chi 2$ values for both models were large (1222.8 & 6401.4), probably due to the large sample size, but the GFI's (.96 & .93) and RMSR (.10 & .12) for the youth and linked youth-parent models, respectively, indicated good fit.
- The authors reported that the youth model accounted for 23% of the variance in enlistment behaviors and 75% of the variance in enlistment intentions. The linked youth-parent model accounted for 43% of the variance in enlistment behaviors and 84% of the variance in enlistment intentions.
- Results indicated that parents had the largest influence on enlistment intentions and behavior. They also confirmed the Army's belief in the dual market theory, that is, that the youth recruiting market is essentially divided into college and work bound youth. College bound youth are less likely to enlist than work bound youth.
- Based on these findings, the authors suggested that recruiting efforts should attend to parents of potential recruits and that advertising should convey the message that parents are supportive of their sons enlisting in the Army.

Bachman, J. G., Segal, D. R., Freedman-Doan, P., & O'Malley, P. M. (1998). Does enlistment propensity predict accession? High school seniors' plans and subsequent behavior. *Armed Forces and Society, 25*(1), 59-80.

Article type: survey
Keywords: propensity to enlist
- This study was based on data collected as part of the Monitoring the Future Project.
- The authors found gender differences in the relationship between enlistment propensity and enlistment behavior. Specifically, 70% of young men who in their senior year "definitely" intended to serve in the armed forces did serve 5-6 years after high school, compared to 29% of those who indicated they "probably" would serve. For women, only 40% who "definitely" intended to serve and 8% of those who indicated they "probably" would serve actually did serve.

- In contrast, 80% of males and 83% of females who "definitely" intended to go to college had done so 5-6 years after HS.

Bachman, J. G., Segal, D. R., Freedman-Doan, P., & O'Malley, P. M. (1998). *Military propensity and enlistments: Cross-sectional and panel analyses of correlates and predictors.* **Monitoring the Future Occasional Paper Series 41, Institute for Social Research, University of Michigan.**

- This report was also based on data collected as part of the Monitoring the Future Project.
- Consistent with other studies, the authors reported higher enlistment rates among African-Americans compared to their percentages in the youth market.
- Propensity was higher among high school seniors who didn't live with either parent and who had less educated parents. Propensity was lowest among seniors expecting to complete college.
- High school seniors whose parents had a higher education level had the lowest propensity and enlistment rates, probably due to their education plans (e.g., they were more likely to expect to attend college).
- Although enlistment *propensity* was highest for seniors who had the lowest grades in high school and whose parents had the lowest education levels, they also had the lowest enlistment rates, possibly because many could not meet military aptitude test score requirements.
- Seniors with higher propensity reported more pro-military attitudes (e.g., regarding military spending, effectiveness of the military), saw the military work as attractive, and perceived greater job opportunities and experiences from military service.
- Substance use was also explored. The authors reported a small positive relationship between smoking and propensity, and no relationship between alcohol and marijuana use and propensity.
- Results also suggested that individuals who engage in more physical activity and aggressive behavior had slightly higher propensity to enlist.

Morrison, D. R. & Myers, D. E. (1998). *Factors influencing the enlistment aspirations and decisions of Hispanic, Black and White male youth.* **(Research Note 98-19). US Army Research Institute for the Behavioral and Social Sciences.**

Article type: survey
Keywords: propensity to enlist

- This study explored factors that influenced male youth to *plans to enlist* in the military and actual enlistment behavior after high school.
- The authors were particularly interested in Hispanics because they were (and still are) the fastest growing ethnic group.
- Senior and sophomore male high school students were interviewed in the spring of 1980, and at follow-up in '82, 84, & '86 (N=9,000) as part of the High School and Beyond study.
- The authors used multivariate analyses (probit and OLS regression) to determine the impact of the variables on military aspirations and enlistment.

- In general, family income, expected wages and the local labor market were negatively related to military aspirations. However, Hispanic and White enlistees tended to come from families with fewer economic resources than Black enlistees.
- Enlistees were more likely to come from female-headed families than the general population (27% vs. 22%). This was especially true for White males (23% vs. 13%).
- Contrary to other research, (see Bachman, Segal, Freedman-Doan, & O'Malley, 1998, p. 23) the authors reported that propensity to enlist was not a strong predictor of actual enlistment behavior. Less than 1/3 of the youth who reported they expected to be in the military (armed services or service academy) actually were in military service two years after graduation.
- Among Hispanics, ethnic identification (whether they spoke Spanish at home, with companions at school or in the community) did not differentiate those who choose the military from those who choose other alternatives.
- Educational expectations of enlistees were high. One half of enlistees intended to attend college some day versus 1/3 of individuals in civilian jobs.
- For Hispanics, expected age of first marriage was positively related to enlistment, while expected age of having their first child was negatively related to enlistment. The authors were unsure as to the meaning of these results.

Segal, M. W., Segal, D. R., Bachman, J. G., Freedman-Doan, P. & O'Malley, P. M. (1998) *Gender and the propensity to enlist in the U.S. Military.* Gender Issues, 64-87.

Article type: survey
Keywords: propensity to enlist

- Using data from the Monitoring the Future project, the authors explored gender differences in attitudes toward the military and in the relationship between propensity and enlistment behavior and demographic variables.
- Their results indicate that although 5-6% of females expect to enlist, 8-9% desire to enlist, as opposed to 17-20% of males expecting to serve and 16-19% desiring to serve. The authors suggest that the Army may benefit from recruiting efforts directed at females.
- This study also explored the effects of background characteristics and educational achievement on the enlistment decision of males and females, but the effect sizes for these variables were low.

Drillings, M. & Fischl, M. A. (1999). Predicting enlistment propensity of young African-Americans. Scientific Parallel Processing Applied Research Center: University of the District of Columbia.

Article type: empirical, interviews
Keywords: propensity to enlist
- African-American high school students (N=460) ages 17-19 from three schools in the District of Columbia were interviewed one-on-one to assess enlistment propensity. Respondents were placed in one of three categories: Unaided Propensity-1 (military was first career choice), Unaided Propensity-2 (military was second choice if first choice did not work out), and Aided Propensity (would consider joining the military, after the interviewer described the many benefits offered by the military).

- Three binary dependent variables reflecting enlistment propensity were created using these categories (e.g., for Unaided Propensity-1, persons who said military was their first choice versus persons who did *not* consider it a first choice). The authors attempted to model each type of enlistment propensity using logistic regression.
- Educational benefits during and after service were important predictors of positive propensity for all three dichotomous criteria. The authors also noted that the presence of a "well functioning" ROTC program in a high school positively influenced propensity.
- A variable referred to as "latent goodwill" which reflected individuals' not verbalizing negative reasons for *not* joining, such as racial discrimination, was also found to be important for enlistment propensity.
- Individuals of low SES were most likely to demonstrate positive propensity.

Freedman-Doan, P. & Bachman, J. G. (1999). *Analysis of linkages between military enlistment plans and behaviors.* (Research Note 99-12). US Army Research Institute for the Behavioral and Social Sciences.

Article type: summary
Keywords: propensity to enlist

- This report summarizes the findings of analyses done on data collected for the Monitoring the Future project. It reviews all of the reports produced, and the major findings were as follows:
- There is a strong relationship between propensity and enlistment. Specific results were not referenced.
- Individuals who expect to enlist, and actually do enlist, are not planning to complete college, view the military as an attractive work environment, and tend to be qualified regarding educational or behavioral military enlistment standards.
- Enlistment propensity has declined throughout the 1990's, primarily as a result of a decline in propensity among African-Americans.
- Changes in armed forces policy regarding illicit drug use coincided with a sharp decline in reported drug use among new recruits. (no note on when the policy was instituted)
- The authors noted that attempts were made to shed light on the problem of early attrition among new recruits. However, the data were not able to reliably identify individuals who left military service early.

Freedman-Doan, Bachman, & P., O'Malley, P. M. (1999). *Is there a gap between soldiers and civilians? Comparing the political attitudes of young recruits with their non-service peers, 1976-1997.* (Research Note 99-19). US Army Research Institute for the Behavioral and Social Sciences.

Article type: survey
Keywords: propensity to enlist, youth attitudes

- Data from the Monitoring the Future (MTF) project was used for this study. The N of the sample was not reported, although the mean number of individuals surveyed for MTF each year was 17,000 from 1976-1995.

- Compared to their non-college bound peers, men in the military were more interested in government, were more trusting in government, more likely to be Republican and were more likely to plan to vote from 1986-1995. Men in the military were similar to their college-bound peers in these comparisons, except men in the military were less likely to be Republican than their college-bound peers.
- Other attitudes of men in the military were predictably different from their civilian peers. They were more supportive of military spending, of the supremacy of the US military over Russia/USSR, of the use of the military to protect the economy and to fight to protect the rights of other countries, and were not supportive of disarmament.

Legree, P. J., Gade, P. A., Martin, D. E., Fischl, M. A., Wilson, M. J., Nieva, V. F., McCloy, R., & Laurence, J. (in press). **Military enlistment and family dynamics: Youth and parental perspectives.** *Military Psychology.*

Article type: survey
Keywords: propensity to enlist

- In order to identify directions for military advertising initiatives and to understand parental influences on children's career decisions, the ACOMS data from the Nieva et al. (1997, p. 22) study were used to estimate the impact of parental attitudes and youth perceptions of parental attitudes on enlistment propensity.
- Correlations between youths' perception of parental attitudes toward the military and reported parental attitudes were low (.14 to .22) and each independently predicted enlistment propensity.
- Recommendations for increasing enlistment propensity were similar to those listed in the Nieva et al. article.

Bachman, J. G., Segal, D. R., Freedman-Doan, P., & O'Malley, P. M. (in press). *Who chooses military service? Correlates of propensity and enlistment in the United States Armed Forces.* **Unpublished paper. Institute for Social Research, University of Michigan.**

Article type: survey
Keywords: propensity to enlist

- Using data from the Monitoring the Future project , variables that relate to enlistment propensity and enlistment behavior were explored.
- The relationship between propensity and actual enlistment differed for men (eta = .57) and women (eta = .38).
- Enlistment rates were lower for individuals with college-educated parents, high grades, and college plans. Males, African-Americans, Hispanics and individuals who view military work as attractive had higher enlistment rates.

Segal, D. R., Bachman, J. G., Freedman-Doan, P., & O'Malley, P. M. (in press). **Propensity to serve in the US Military: Temporal trends and subgroup differences.** *Armed Forces and Society.*

Article type: survey
Keywords: propensity to enlist

- Trends in propensity to enlist among 8th, 10th, and 12th grade students were examined from data collected from 1975 to 1997 (data for 8th and 10th grade students were only collected after 1990). The data came from the Monitoring the Future project. The sample sizes per year ranged from 14,832-18,906.
- In general, trends indicate an increase from 1976-1996 in students who indicate they *definitely will not* serve in the armed forces.
- Most other results reported echo those of other MTF studies. For example, the authors noted that women were more likely to desire to serve than expect to serve and propensity among African-American males after 1990 has dropped considerably (it was approximately 48% until 1990 and has remained below 30% since). Lower propensity among students with college plans compared to those without college plans was also reported.

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Bachman, J. G., Segal, D. R., Freedman-Doan, P., & O'Malley, P. M. (1998). *Military propensity and enlistments: Cross-sectional and panel analyses of correlates and predictors.* Monitoring the Future Occasional Paper Series 41, Institute for Social Research, University of Michigan. 35

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Bachman, J. G., Segal, D. R., Freedman-Doan, P., O'Malley, P. M. (1998). Does enlistment propensity predict accession? High school seniors' plans and subsequent behavior. *Armed Forces and Society, 25*(1), 59-80. 35

Baker, T. A. (1990). *A cross-sectional comparison of Army advertising attributes.* (Research Report 1578). U. S. Army Research Institute for the Behavioral and Social Sciences. 19

Baxter, S. & Gay, N. L. (1988). *The message content of advertisements for active Army enlistments.* (Research Report 1473). U. S. Army Research Institute. 18

Benedict, M. E. (1987). The 1986 ARI survey of U.S. Army recruits: Technical Manual. (Technical Report 735). U.S. Army Research Institute for the Behavioral and Social Sciences. 30

Benedict, M. E. (1989). *The soldier salesperson: Selection and basic recruiter training issues in the U. S. Army.* (Research Report 1534) U. S. Army Research Institute for the Behavioral and Social Sciences. 5

Borman, W. C. & Fischl, M. A. (1981). *Recruiter assessment center: Candidate materials and evaluator guidelines.* (Research Product 81-10). U. S. Army Research Institute for the Behavioral and Social Sciences. 9

Borman, W. C. (1979). *Development of an assessment program for selecting Army recruiters.* (Technical Report 33) Personnel Decisions Research Institute: Minneapolis, MN. 3

Borman, W. C. (1982). Validity of a behavioral assessment for predicting military recruiter performance. *Journal of Applied Psychology, 67*(1). *See also* Borman, W. C. & Fischl, M. A. (1980). *Evaluation of an Army recruiter assessment program.* (Technical Report 57) Personnel Decisions Research Institute: Minneapolis, MN. 9

Borman, W. C. , Russell, T. L., & Skilling, N. J. (1986). *Development of behavior-based rating scales and analysis of recruiter selection battery data for the Army recruiter job.* (ARI Research Report 1441). U. S. Army Research Institute for the Behavioral and Social Sciences. 4

Borman, W. C., Rosse, R. L., & Rose, S. R. (1982). *Predicting performance in recruiter training: Validity of assessment in the recruiter development center.* (Institute Report 73). Personnel Decisions Research Institute, Minneapolis, MN. 9

Borman, W. C., Toquam, J. L, & Rosse, R. L. (1976). *Dimensions of the Army recruiter and guidance counselor job*. (Technical Report 10) Personnel Decisions Research Institute: Minneapolis, MN.25

Brogden, H. E. & Taylor, E. K. (1949). *The validity of recruiter selection instruments at various points of cut* (Report No. 781). Washington, DC: Personnel Research Section: U.S. Army Adjutant General's Office. 3

Brown, C. (1984). *Military enlistments: What can we learn from geographic variation*. (Technical Report 620). U. S. Army Research Institute for the Behavioral and Social Sciences................. 17

Brown, G. H., Wood, M. D., & Harris, J. D. (1975). *Army recruiters: Criterion development and preliminary validation of selection procedure* (FR-ED-75-8). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences... 3

Buchs, T. A. (1994). Validation and justification of the use of a sales-aptitude test for U. S. Army recruiter selection. Unpublished Master's Thesis, Navy Postgraduate School. 7

Chonko, L. B., Madden, C. S., Tanner, J. F., & Davis, R. (1991). *Analysis of Army recruiter selling techniques*. (Research Report 1589) U. S. Army Research Institute for the Behavioral and Social Sciences. 11

Dale, C. & Gilroy, C. (1985). Determinants of enlistments: A macroeconomic time-series view. *Armed Forces and Society, 10(2)*, 192-210. 22

Dale, C. & Gilroy, C. (1985). Enlistments in the all-volunteer force. *American Economic Review 75(3)*, 547-551. 21

Dale, C. & Hill, L. G. (1984). *Military and civilian lifetime earnings comparisons*. (Technical Report 619). US Army Research Institute for the Behavioral and Social Sciences. 27

Daula, T. & Smith, D. A. (1986). Recruiting goals, enlistment supply, and enlistments in the U.S. Army. In C. L. Gilroy (Ed.), *Army Manpower Economics* (pp. 101-126). Boulder, CO: Westview Press. 23

Drillings, M. & Fischl, M. A. (1999). Predicting enlistment propensity of young African-Americans. Scientific Parallel Processing Applied Research Center: University of the District of Columbia. 36

Elig, T. W. (1988). *Targeting the delivery of Army advertisements on television*. (Research Report 1484). U. S. Army Research Institute for the Behavioral and Social Sciences. 18

Elig, T. W., Johnson, R. M., Gade, P. A., & Hertzbach, A. (1984). *The Army enlistment decision: An overview of the ARI recruit surveys, 1982 and 1983*. (Research Report 1371). U.S. Army Research Institute for the Behavioral and Social Sciences.. 27

Elig, T. W., Weltin, M. M., Hertzbach, A., Johnson, R. M., & Gade, P. A. (1985). *U. S. Army advertising from the recruits' viewpoint*. (Research Report 1407). U. S. Army Research Institute for the Behavioral and Social Sciences.. 17

Freedman-Doan, Bachman, P., O'Malley, P. M. (1999). Is there a gap between soldiers and civilians? Comparing the political attitudes of young recruits with their non-service peers, 1976-1997. (Research Note 99-19). US Army Research Institute for the Behavioral and Social Sciences. 37

Freedman-Doan, P. & Bachman, J. G. (1999). *Analysis of linkages between military enlistment plans and behaviors.* (Research Note 99-12). US Army Research Institute for the Behavioral and Social Sciences. 37

Friedland, J. E. & Little, R. D. (1984). Educational levels, aspirations, and expectations of military and civilian males, ages 18-22. *Armed Forces and Society, 10*(2), 211-228...................... 29

Frieman, S. R. (1987). *Sales Training for Army Recruiter Success: Interviews with excellent recruiters.* (Research Product 87-37). U. S. Army Research Institute for the Behavioral and Social Sciences. 5

Frieman, S. R., (1987). *Sales Training for Army Recruiter Success: Modeling the Sales Strategies and Skills of Excellent Recruiters.* (Research Product 87-38). U. S. Army Research Institute for the Behavioral and Social Sciences. 5

Goldberg, L. & Greenston, P. (1986). Economic analysis of Army enlistments: Policy implications. In C. L. Gilroy (Ed.), *Army Manpower Economics* (pp. 61-91). Boulder, CO: Westview Press. 23

Hissong, Jerry B., & Plotkin, Harris M. (1998). *Successful Recruiter Profile Project.* The United States Army Recruiting Command. Contract No. TCN 97-010, Scientific Services Program. ... 7

Horne, D. K. (1984). An economic analysis of Army enlistment supply (DRAFT- MPPRG 84-5). Manpower and Personnel Policy Research Group. 21

Howell, R. D., Wilcox, J. B., & Wilkes, R. E. (1988). *Modeling the effects of Army advertising.* (Technical Report 821). U. S. Army Research Institute for the Behavioral and Social Sciences. 17

Hughes, A. O. & Khatri, D. S. (1996). *Exploratory research on African-American youth's propensity to join the military.* (ARI Research Note 96-12). U. S. Army Research Institute for the Behavioral and Social Sciences. 33

Hull, G. L. & Benedict, M. E. (1988). *The evaluability assessment of the recruiter training program.* (Research Report 1479). U. S. Army Research Institute for the Behavioral and Social Sciences.10

Hull, G. L. & Nelson, W. A. (1991). *Instructional needs analysis of the US Army Recruiting Command (USAREC) on-the-job recruiter training program.* (Technical Report 1590). U. S. Army Research Institute for the Behavioral and Social Sciences. 12

Hull, G. L., Kleinman, K., Allen, G., & Benedict, M. E. (1988). *Evaluation of the US Army Recruiting Command Recruiter Training Program.* (Research Report 1503). U. S. Army Research Institute for the Behavioral and Social Sciences. 10

Jacobson, S. (1987). *Sales Training for Army Recruiter Success: Interviews with excellent recruiters.* (Technical Report 780). U. S. Army Research Institute for the Behavioral and Social Sciences. 5

Kearl, C. E., & Nelson, A. (1990). *Delayed Entry Program (DEP) attrition: A microdata model.* (Technical Report 889). U. S. Army Research Institute for the Behavioral and Social Sciences. 32

Knapp, D. J. (1987). *Final report on a national cross-validation of the Computerized Adaptive Screening Test (CAST).* (Technical Report 768). U. S. Army Research Institute for the Behavioral and Social Sciences. 15

Lawrence, G. H., & Legree, P. J. (1996). *Military Enlistment Propensity: A review of recent literature.* (ARI Research Note 96-69). U. S. Army Research Institute for the Behavioral and Social Sciences. 33

Legree, P. J., Fischl, M. A., & Gade, P. A. (1997). *Estimating AFQT by telephone using a computer adaptive test.* (Technical Report 1058). U. S. Army Research Institute for the Behavioral and Social Sciences. 15

Legree, P. J., Fischl, M. A., Gade, P. A., & Wilson, M. (1998). Testing word knowledge by telephone to estimate general cognitive aptitude using an adaptive test. *Intelligence, 26*(2), 91-98. 15

Legree, P. J., Gade, P. A., Martin, D. E., Fischl, M. A., Wilson, M. J., Nieva, V. F., McCloy, R., & Laurence, J. (1998). Military enlistment and family dynamics: Youth and parental perspectives. *Military Psychology, 12*(1), 31-49 38

Love, K. G., Jex, S. M., Richard, R. L., & McMullin, C. (1991). *Organizational assessment to support the USAREC On-the-Job (OJT) Recruiter Training Program.* (ARI Research Note 91-89). U. S. Army Research Institute for the Behavioral and Social Sciences. 12

McBride, J. R. & Cooper, R. R. (1999). *Modification of the Computerized Adaptive Screening Test (CAST) for use by recruiters in all military services.* (Research Note 99-25). U. S. Army Research Institute for the Behavioral and Social Sciences. 15

Morrison, D. R. & Myers, D. E. (1998). *Factors influencing the enlistment aspirations and decisions of Hispanic, Black and White male youth.* (Research Note 98-19). US Army Research Institute for the Behavioral and Social Sciences 35

Nelson, A. (1988). *Delayed Entry Program (DEP) loss behavior.* (Technical Report 823). U. S. Army Research Institute for the Behavioral and Social Sciences. 24

Nieva, V. F., Wilson, M. J., Norris, D. G., Greenlees, J. B., Laurence, J., & McCloy, R. (1997) *Enlistment intentions and behaviors: Youth and parental models.* (Contractor Report 97-13) US Army Research Institute for the Behavioral and Social Sciences. 34

Nord, R. D., Schmitz, E. J., & Weiland, T. A. (1986). *Propensity and the enlistment decision.* (Technical Report 723). U. S. Army Research Institute for the Behavioral and Social Sciences. 29

Phillips, C. E. & Schmitz, E. J. (1985). A microdata model of delayed entry program (DEP) behavior. (Technical Report 666). U. S. Army Research Institute for the Behavioral and Social Sciences. 22

Pliske, R. M., Elig, T. M., & Johnson, R. M. (1986). *Towards an understanding of Army enlistment motivation patterns.* (Technical Report 702) U. S. Army Research Institute for the Behavioral and Social Sciences. 29

Pond, S. B., Powell, T. E., Norton, J. J., & Thayer, P. W. (1992). *Feasibility of using realistic job previews in the Army recruiter training process.* (Technical Report 1630). U. S. Army Research Institute for the Behavioral and Social Sciences. 13

Russell, T. L. & Borman, W. C. (1986). *Predicting military recruiter effectiveness: A literature review.* (ARI Research Note 87-23) U. S. Army Research Institute for the Behavioral and Social Sciences. 25

Schmitz, E. J. & Nelson, A. (1984). Modeling the enlistment process for personnel planning. (Research Report 1416). U.S. Army Research Institute for the Behavioral and Social Sciences. 28

Schmitz, E. J. (1990). *The Army College Fund and military manpower: A review of existing research.* (Research Report 1572). U. S. Army Research Institute for the Behavioral and Social Sciences. 32

Segal, D. R., Bachman, J. G., Freedman-Doan, P., & O'Malley, P. M. (in press). Propensity to serve in the US Military: Temporal trends and subgroup differences. *Armed Forces and Society.* 39

Segal, M. W., Segal, D. R., Bachman, J. G., Freedman-Doan, P. & O'Malley, P. M. (1998) *Gender and the propensity to enlist in the U.S. Military.* Gender Issues, 64-87. 36

Tarver, S. M., Miller, A. E., & Ginexi, E. M. (1994). *A qualitative evaluation of reasons for enlisting in the military: Interviews with new active-duty recruits.* Arlington, VA: Defense Manpower Data Center, Program Evaluation Branch. 32

Taylor, J. G., Lindsay, G. F., Manager, B. K., & Weitzman, R. A. (1995). *Development of a model to predict recruiter success (initial results).* Naval Postgraduate School: Monterey, CA. 7

Verdugo, N. & Berliant, K. R. (1989). *Estimating the Army's prime recruiting market.* (Technical Report 832). U. S. Army Research Institute for the Behavioral and Social Sciences. 24

Weiss, H. M. (1988). *Evaluation of recruiter performance measures and policy.* (Research Report 1485). U. S. Army Research Institute for the Behavioral and Social Sciences. 25

Weiss, H. M., Citera, M, & Finfer, L. (1989). *Evaluation of an Army recruiter selection program.* (Research Report 1514) U. S. Army Research Institute for the Behavioral and Social Sciences. 6

Wilson, M. J. & Perry, M. S. (1988). *The career decision survey: Modeling the Army enlistment decision.* (Technical Report 814). U. S. Army Research Institute for the Behavioral and Social Sciences. 31

Wilson, M. J., Gay, N. L., Allen, B. F., and Celeste, J. F. (1988). *The Army enlistment decision: A selected annotated bibliography.* (Research Note 88-65). U.S. Army Research Institute for the Behavioral and Social Sciences. 31

Zirk, D. A., McTeigue, R. J., Wilson, M., Adelman, L, & Pliske, R. (1987). *Alternative approaches to modeling the individual enlistment decision: A literature review.* (Technical Report 738). U. S. Army Research Institute for the Behavioral and Social Sciences. 30